

CLAIMS

1. A handheld laser hair treatment device, comprising:

a laser assembly, further comprising:

a laser beam generator;

a power supply for supplying power to the laser beam generator; and

means to direct at least one laser beam outward from the laser assembly;
and

means to expose the scalp of an individual when the laser treatment device is moved over the individual's scalp such that the laser beam is not obstructed from coming in contact with the scalp by the individual's hair;

whereby the scalp of the individual is exposed during application of energy from the laser beam to the scalp.

2. A device, as in claim 1, wherein:

A the laser beam ^{*assembly*} ~~generator~~ produces a plurality of laser beams, each laser beam spaced apart from one another;

the means to expose the scalp further comprises a first plurality of teeth, each tooth associated with a laser beam and positioned such that when the device is

moved across an individual's scalp, each tooth creates a furrow in the hair in front of the laser beam and the laser beam is substantially unobstructed by the individual's hair;

whereby the amount of laser energy reaching the individual's scalp is maximized by the creation of furrows in the individual's hair.

3. A device, as in claim 2, further comprising:

a second plurality of teeth, each tooth in the second plurality of teeth associated with a tooth in the first plurality of teeth such that they form a related pair of teeth which are associated with a laser beam; and

each related pair of teeth are positioned such that the first tooth is positioned ahead of its related laser beam and the second tooth is positioned behind its related laser beam, such that when the device is moved across an individual's scalp, the first tooth creates a furrow for the laser beam and the second tooth holds the furrow open while the laser is moving across the individual's scalp;

whereby the related pairs of teeth hold the furrow open for an extended period of time while the laser beam is being directed to the individual scalp.

4. A device, as in claim 3, wherein:

the laser generator produces a single laser beam; and

a beam splitter is used to split the single laser beam into a plurality of separate laser beams;

whereby the device produces multiple laser beams from a single laser beam generator.

5. A device, as in claim 4, wherein:

the beam splitter is a beam reflector having a zigzag edge having a plurality of teeth, each reflector tooth in the zigzag edge reflecting a portion of the laser beam;

whereby the portions of the laser beam created by the reflector teeth each form an independent laser beam.

6. A device, as in claim 1, wherein:

the laser generator produces a single laser beam; and

a beam splitter is used to split the single laser beam into a plurality of separate laser beams;

whereby the device produces multiple laser beams from a single laser beam generator.

7. A device, as in claim 6, wherein:

the beam splitter is a beam reflector having a zigzag edge having a plurality of teeth, each reflector tooth in the zigzag edge reflecting a portion of the laser beam;

whereby the portions of the laser beam created by the reflector teeth each form an independent laser beam.

8. A handheld laser hair treatment device, comprising:

a laser assembly, further comprising:

a laser beam generator which generates a laser beam;

a power supply for supplying power to the laser beam generator; and

a beam splitter for splitting the laser beam into multiple substantially parallel laser beams and to direct the laser beams outward from the laser assembly;

whereby the scalp of the individual is exposed during application of energy from the laser beam to the scalp.

9. A device, as in claim 8, wherein:

the beam splitter is a beam reflector having a zigzag edge with a plurality of reflector teeth, each reflector tooth in the zigzag edge reflecting a portion of the laser beam;

whereby the portions of the laser beam created by the reflector teeth each form an independent laser beam.

10. A device, as in claim 9, further comprising:

a first plurality of furrow teeth, each furrow tooth associated with a laser beam and positioned such that when the device is moved across an individual's scalp, each furrow tooth creates a furrow in the hair in front of the laser beam and the laser beam is substantially unobstructed by the individual's hair;

whereby the amount of laser energy reaching the individual's scalp is maximized by the creation of furrows in the individual's hair.

11. A device, as in claim 10, further comprising:

a second plurality of furrow teeth, each furrow tooth in the second plurality of furrow teeth associated with a tooth in the first plurality of furrow teeth such that they form a related pair of furrow teeth which are associated with a laser beam; and

each related pair of furrow teeth are positioned such that the first tooth is positioned ahead of its related laser beam and the second tooth is positioned behind its related laser beam, such that when the device is moved across an individual's scalp, the first furrow tooth creates a furrow in the individual's hair for the laser beam and the second furrow tooth holds the furrow open while the laser is moving across the individual's scalp;

whereby the related pairs of furrow teeth hold the furrow open for an extended period of time while the laser beam is being directed to the individual's scalp.

12. A method of applying laser energy to an individual scalp, including the steps of:

applying laser energy to the scalp of an individual by moving a handheld laser generator across the individual's scalp; and

a maximizing the amount of laser energy applied to the scalp of the individual by deflecting hair away from the scalp of an individual such that ^{the laser energy} ~~the laser beam~~ is not obstructed from coming in contact with the scalp by the individual's hair;

a whereby the scalp of the individual is substantially unobstructed by hair during application of energy from ^{the laser energy} ~~the laser beam~~ to the scalp.

13. A method, as in claim 12, including the additional step of:

a deflecting the hair away from the path of ^{the laser energy} ~~the laser beam~~ by creating a furrow in
a the individual's hair prior to passing ^{the laser energy} ~~the laser beam~~ over the portion of the scalp in which the furrow was created.

14. A method, as in claim 13, including the additional step of:

a using a plurality of furrow teeth which are associated with ^{the laser energy} ~~the laser beam~~, and
a positioned forward of the path of ^{of the laser energy} ~~laser beam~~, to create furrows by parting the
a individual's hair prior to passing ^{the laser energy} ~~the laser beam~~ over the individual's scalp.

15. A method, as in claim 14, including the additional step of:

a
a
extending the time in which the furrows remain open by using pairs of associated furrow teeth located in the path ^{of the laser energy} of laser beam and positioned in front of and to the rear of ^{the laser energy} the laser beam.

16. A method, as in claim 15, including the additional step of:

a
extending the surface area covered by ^{the laser energy} the laser beam by splitting ^{a single laser beam} the laser beam into multiple, substantially parallel, laser beams with a beam splitter;

whereby a large total surface area of scalp can be irradiated by a single laser beam.

17. A method, as in claim 16, including the additional step of:

a
a
splitting ^{the single laser beam} the laser beam with a multi-toothed beam refractor having a zigzag edge with a plurality of reflector teeth, and reflecting a portion of ^{the single} the laser beam with each reflector tooth;

a
whereby the portions of ^{the single laser beam} the laser beam created by the reflector teeth each form an independent laser beam.

18. A method, as in claim 13, including the additional step of:

a
extending the surface area covered by ^{a single laser beam} the laser beam by splitting the laser beam into multiple, substantially parallel, laser beams with a beam splitter;

whereby a large total surface area of scalp can be irradiated by a single laser beam.

19. A method, as in claim 18, including the additional step of:

a splitting the laser beam with a multi-toothed beam refractor having a zigzag edge with a plurality of reflector teeth, and reflecting a portion of ^{the single laser beam} the laser beam with each reflector tooth;

a whereby the portions of ^{the single laser beam} the laser beam created by the reflector teeth each form an independent laser beam.

20. A method, as in claim 12, including the additional step of:

a extending the surface area covered by ^{the laser energy of single laser beam} the laser beam by splitting the laser beam into multiple, substantially parallel, laser beams with a beam splitter;

where a the large total surface area of scalp can be irradiated by a single laser beam.